

## CLAIMS

What is claimed is:

1. A computerized method for flexibly executing a guideline encoded in a format  
5 based on a guideline representation model, the method comprising:  
retrieving a trace record for an instance of the guideline being executed, the  
trace record comprising an execution history for the instance of the guideline being executed;  
and  
recommending to a user a guideline step for execution based on the execution  
10 history of the guideline instance.
2. The method of claim 1, wherein the execution history of the guideline instance  
indicates that a guideline step had not previously been executed, the method comprising  
recommending at least one unexecuted guideline step.  
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3. The method of claim 1, wherein the execution history of the guideline instance  
indicates a patient's current management state, the method comprising recommending at least  
one guideline step based on the patient's management state.
- 20 4. The method of claim 3, comprising retrieving at least one patient record, and  
recommending a guideline step based on data provided by the patient record.
5. The method of claim 1, wherein the execution history of the guideline instance  
indicates an execution state with regard to the guideline instance, the method comprising  
25 recommending at least one guideline step based on the execution state.
6. The method of claim 1, wherein the guideline representation model comprises  
a GLIF model or a derivation thereof.
- 30 7. The method of claim 1, comprising communicating the recommended step to a  
clinical application selected from a group consisting of a physician order entry, a clinical  
event monitors, and a notification system.

8. The method of claim 1, comprising receiving a notice of a clinical event, and updating at least one of a trace record, an event record, and a patient record, to reflect the clinical event.

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9. The method of claim 8, comprising triggering a guideline step for execution based on the occurrence of the clinical event.

10. The method of claim 1, wherein the trace record maintains the history for the instance of the guideline being executed for a particular patient.

11. The method of claim 1, comprising receiving an indication to override the recommended step and a selection to execute an alternate step of the guideline.

12. The method of claim 1, comprising receiving an indication to stop a recommended step and updating the trace record to indicate that the recommended step has been placed in an inactive state.

13. The method of claim 1, comprising receiving an indication to start a step and updating the trace record to indicate that the recommended step has been placed in an active.

14. A computerized method for flexibly executing a guideline encoded in a format based on a guideline representation model, the method comprising:

retrieving a trace record for an instance of the guideline being executed, the trace record comprising an execution history for the instance of the guideline being executed, the execution history indicating at least one of a patient's current management state and an execution state with regard to the guideline instance;

recommending to a user a guideline step for execution based on the execution history of the guideline instance;

receiving at least one of:

an indication to override the recommended step and a selection to execute an alternate step of the guideline,

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an indication to stop a recommended step, and  
an indication to start a step; and  
updating the trace record according to the received indication.

5           15.    A system for flexibly executing an instance of a guideline encoded in a format  
based on a guideline representation models, the system comprising at least one computing  
device including software that when executed performs a method, the method comprising  
retrieving a trace record for an instance of the guideline being executed, the  
trace record comprising an execution history for the instance of the guideline being executed;  
10   and  
recommending to a user a guideline step for execution based on the execution  
history of the guideline instance.

15           16.    The system of claim 15, wherein the execution history of the guideline  
instance indicates that a guideline step had not previously been executed, the method  
comprising recommending at least one unexecuted guideline step.

20           17.    The system of claim 15, wherein the execution history of the guideline  
instance indicates a patient's current management state, the method comprising  
recommending at least one guideline step based on the patient's management state.

18.    The system of claim 17, the method comprising retrieving at least one patient  
record, and recommending a guideline step based on data provided by the patient record.

25           19.    The system of claim 15, wherein the execution history of the guideline  
instance indicates an execution state with regard to the guideline instance, the method  
comprising recommending at least one guideline step based on the execution state.

30           20.    The system of claim 15, wherein the guideline representation model comprises  
a GLIF model or a derivation thereof.

21. The system of claim 15, the method comprising communicating the recommended step to a clinical application selected from a group consisting of a physician order entry, a clinical event monitors, and a notification system.

5 22. The system of claim 15, the method comprising receiving a notice of a clinical event, and updating at least one of a trace record, an event record, and a patient record, to reflect the clinical event.

23. The system of claim 22, the method comprising triggering a guideline step for  
10 execution based on the occurrence of the clinical event.

24. The system of claim 15, wherein the trace record maintains the history for the instance of the guideline being executed for a particular patient.

15 25. The system of claim 15, the method comprising receiving an indication to override the recommended step and a selection to execute an alternate step of the guideline.

26. The system of claim 15, the method comprising receiving an indication to stop  
20 a recommended step and updating the trace record to indicate that the recommended step has been placed in an inactive state.

27. The system of claim 15, the method comprising receiving an indication to start  
an step and updating the trace record to indicate that the recommended step has been placed in  
an active.

25 28. A system for flexibly executing a guideline encoded in a format based on a guideline representation model, the system comprising at least one computing device including software that when executed performs a method, the method comprising:  
30 retrieving a trace record for an instance of the guideline being executed, the trace record comprising an execution history for the instance of the guideline being executed, the execution history indicating at least one of a patient's current management state and an execution state with regard to the guideline instance;

recommending to a user a guideline step for execution based on the execution history of the guideline instance;

receiving at least one of:

an indication to override the recommended step and a selection to execute an alternate step of the guideline,

an indication to stop a recommended step, and

an indication to start a step; and

updating the trace record according to the received indication.

29. A computer-readable medium comprising at least one software component that when executed performs a method comprising:

retrieving a trace record for an instance of the guideline being executed, the trace record comprising an execution history for the instance of the guideline being executed; and

recommending to a user a guideline step for execution based on the execution history of the guideline instance.

30. The computer-readable medium of claim 29, wherein the execution history of the guideline instance indicates that a guideline step had not previously been executed, the method comprising recommending at least one unexecuted guideline step.

31. The computer-readable medium of claim 29, wherein the execution history of the guideline instance indicates a patient's current management state, the method comprising recommending at least one guideline step based on the patient's management state.

32. The computer-readable medium of claim 31, the method comprising retrieving at least one patient record, and recommending a guideline step based on data provided by the patient record.

33. The computer-readable medium of claim 29, wherein the execution history of the guideline instance indicates an execution state with regard to the guideline instance, the method comprising recommending at least one guideline step based on the execution state.

34. The computer-readable medium of claim 29, wherein the guideline representation model comprises a GLIF model or a derivation thereof.

5           35. The computer-readable medium of claim 29, the method comprising communicating the recommended step to a clinical application selected from a group consisting of a physician order entry, a clinical event monitors, and a notification system.

10           36. The computer-readable medium of claim 29, the method comprising receiving a notice of a clinical event, and updating at least one of a trace record, an event record, and a patient record, to reflect the clinical event.

15           37. The computer-readable medium of claim 36, the method comprising triggering a guideline step for execution based on the occurrence of the clinical event.

          38. The computer-readable medium of claim 36, wherein the trace record maintains the history for the instance of the guideline being executed for a particular patient.

20           39. The computer-readable medium of claim 29, the method comprising receiving an indication to override the recommended step and a selection to execute an alternate step of the guideline.

25           40. The computer-readable medium of claim 29, the method comprising receiving an indication to stop a recommended step and updating the trace record to indicate that the recommended step has been placed in an inactive state.

30           41. The computer-readable medium of claim 29, the method comprising receiving an indication to start a step and updating the trace record to indicate that the recommended step has been placed in an active.

          42. A computer-readable medium comprising at least one software component that when executed performs a method comprising:

retrieving a trace record for an instance of the guideline being executed, the trace record comprising an execution history for the instance of the guideline being executed, the execution history indicating at least one of a patient's current management state and an execution state with regard to the guideline instance;

5 recommending to a user a guideline step for execution based on the execution history of the guideline instance;

receiving at least one of:

an indication to override the recommended step and a selection to execute an alternate step of the guideline,

10 an indication to stop a recommended step, and

an indication to start a step; and

updating the trace record according to the received indication.

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